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AUTHORITY

AGO D/A ltr, 29 Apr 1980

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DEPARTMENT OF THE ARMY
OFFICE OF THE ADJUTANT GENERAL
WASHINGTON, D.C. 20310

(22)

IN REPLY REFER TO

AGAM-P (M) (15 Sep 67) FOR OT RD-670365

20 September 1967

SUBJECT: Operational Report - Lessons Learned, Headquarters,
52d Signal Battalion

TO: SEE DISTRIBUTION

1. Subject report is forwarded for review and evaluation by USACDC in accordance with paragraph 6f, AR 1-19 and by USCONARC in accordance with paragraph 6c and d, AR 1-19. Evaluations and corrective actions should be reported to ACSFOR OT within 90 days of receipt of covering letter.

2. Information contained in this report is provided to insure appropriate benefits in the future from Lessons Learned during current operations, and may be adapted for use in developing training material.

BY ORDER OF THE SECRETARY OF THE ARMY:

Kenneth G. Wickham FEB 28 1968
KENNETH G. WICKHAM
Major General, USA
The Adjutant General

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DEPARTMENT OF THE ARMY
HEADQUARTERS, 52D SIGNAL BATTALION
APO San Francisco 96215

SCCVSG-VD

11 May 1967

OPERATIONAL REPORT - LESSONS LEARNED (1 February 1967 to 30 April 1967)

SECTION 1 Significant Organization or Unit Activities

1. ORGANIZATION

a. Since the last reporting period two new sites have become operational within the Battalion and three companies were activated. On 16 March 1967, Vi Thanh became operational when one VHF Radio System was activated to Bac Lieu. On 21 April 1967, Long Xuyen became operational when one VHF Radio System was activated to Sa Dec.

b. On 10 March 1967, Companies B, C, and D were activated thereby forming the entire Battalion. Following is the reconfiguration of the Battalion:

(1) HHD, 52D Signal Battalion	Can Tho
(2) Company A	Can Tho
(3) Company B	My Tho
(4) Company C HQS	Sa Dec
(a) Detachment 1	Sa Dec
(b) Detachment 2	Vinh Long
(c) Detachment 3	Long Xuyen
(5) Company D HQS	Bac Lieu
(a) Detachment 1	Bac Lieu
(b) Detachment 2	Soc Trang
(c) Detachment 3	Ca Mau
(d) Detachment 4	Vi Thanh

c. On 13 February 1967, a MTOE submission was forwarded to 2D Signal Group reflecting the reduction of 150 spaces and the addition of teams for three Dial Central Offices and two Technical Control Facilities (AN/MSQ-73).

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ACSFOR - RD File

670365

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2. OPERATIONS

a. During this period the Battalion continued to provide Army Area Communications facilities in support of the USMACV Advisory Teams and other Free World Forces in the IV Corps Tactical Zone. In addition, the following new facilities and support have been provided:

- (1) 16 March 1967 - VHF Radio System established between Vi Thanh Sector and Bac Lieu, 21st Inf Div (ARVN).
- (2) 1 April 1967 - AN/GRC-26D's at Soc Trang and Vinh Long became operational in the IV Corps Operations and Intelligence Net.
- (3) 15 April 1967 - AN/GRC-106 (SSB Radio) were issued to units providing support at Phong Dinh (Can Tho area), Soc Trang and Bac Lieu Sectors. Communications sets are utilized from sector to sub-sector.
- (4) 15 April 1967 - A 400 Line Dial Central Office was cut-over to service at Vinh Long Army Airfield. This is the first DCO Project completed within the Battalion and in the IV Corps Tactical Zone.
- (5) 15 April 1967 - Technical Control Facility, AN/ASQ-73, was successfully put into operation at Soc Trang Army Airfield. Unit has the capability of patching, monitoring, and testing both VHF and Tropospheric Radio Systems that pass thru the southern portion of the IV CTZ.
- (6) 21 April 1967 - VHF Radio System activated between Long Xuyen Sector and Sa Dec, 9th Inf Div (ARVN).
- (7) 30 April 1967 - Installed AN/MTC-1 switchboard at Sa Dec.

b. Outside cable plant projects completed during the period by a platoon of the 40th Signal Battalion (Construction):

- (1) Soc Trang - 50 and 100 pair cable from Army Airfield to MACV.
- (2) Vinh Long - 100 pair cable for support of DCU.
- (3) My Tho - 100 pair cable from MACV to VHF Site.

c. Class IV Projects involving the Battalion continued to progress during the period with requisite building construction being accomplished by contractor:

- (1) Can Tho 1000 line DCO - Building 80% completed as of 30 April 1967.

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(2) Can Tho Commcenter - Building 80% completed as of
30 April 1967.

(3) Soc Trang 400 line DCO - Building 90% completed as of
30 April 1967.

d. Construction necessary for the relocation of the communications facilities from Can Tho City to Can Tho Army Airfield progressed rapidly during the reporting period. The following have been accomplished by the Battalion under the self-help construction program:

(1) Construction of Tower A-216 (180 ft).

(2) Completion of Electronic Equipment Building to house VHF and M/W equipment.

(3) Completion of Signal Maintenance Building.

(4) Completion of Signal Supply Building.

(5) Completion of Company A Orderly Room.

e. The physical security posture of the Battalion improved greatly during the period, primarily due to the availability of sandbags, grenade screening material, barbed wire and security lights. Problems still exist in obtaining sand at the various detachment sites. Sand normally is trucked to locations to preclude prohibitive costs of procuring it locally.

f. Formal training was conducted by units of the Battalion on a total of 13 days. The following subject areas were covered:

- (1) Command Information
- (2) Character Guidance
- (3) Code of Conduct
- (4) CBR
- (5) Emergency Medical Care and First Aid
- (6) Driver Training
- (7) Riot Control and Civil Disturbance
- (8) Weapons Safety
- (9) Weapons Familiarization Firing
- (10) Survival, Escape, and Evasion

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- (11) Safeguarding Defense Information
- (12) Defense Against Subversion
- (13) Counter Insurgency Training
- (14) Field Sanitation

SECTION 2 COMMANDERS OBSERVATIONS

PART I: OBSERVATIONS (LESSONS LEARNED)

a. PERSONNEL: None

b. OPERATIONS:

ITEM: Alternate Message Traffic Routing

DISCUSSION: Due to limited amount of circuits between the Can Tho Communications Center and the Companies and Detachments of the Battalion and the non-availability of additional teletype and secure equipment, it was impossible to provide a complete altroute capability for classified message traffic throughout the Battalion. Since the companies were operating the IV Corps Operations and Intelligence Net using AN/GRC-26D Radios remoted from their respective commcenters, a procedure was devised whereby traffic designated for addressees served by the Battalion could be passed over the Operations and Intelligence Net with assurance of proper protection. By establishing procedures whereby a minimum of 10% of the daily traffic is passed over the net by each site, the net is kept operational 24 hours a day with live traffic and allows for a smooth transition to alternate route.

OBSERVATION: The use of the AN/GRC-26D to pass commcenter message traffic normally passed by other means (VHF or Microwave), provides an excellent altroute. The procedure of traffic being passed daily insures that the net remains operational and is ready to accept all commcenter traffic should the need arise.

ITEM: Antenna Installation

DISCUSSION: A requirement existed to establish a VHF Radio System from Sa Dec to Long Xuyen. Due to non-availability of land adjacent to the operational site at Long Xuyen, the antenna had to be placed on the roof of a building. The normal mast sections for the AN/TRC-24 antenna could not be used due to difficulty in raising the antenna. Therefore, the AT-557, AN/GRC-50 antenna mast, was used by securing the base to a flat portion of the roof, raising the antenna, and then guying off the corners of the building.

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OBSERVATION: Although the AT-557 is generally utilized with the AN/GRC-50 Radio, the modification kit accompanying it may be used for AN/TRC-24 antennas. The ability to raise the sections by use of the crank permits employment of this antenna where other antennas cannot be used.

ITEM: Main Distribution Frame (MDF) Shelter

DISCUSSION: Due to variable weather conditions in RVN, particularly rain and humidity, Main Distribution Frames have a tendency to corrode rapidly. Space limitations at some sites in the IV CTZ have caused some of the MDF's to be located outdoors. As an example, at My Tho a new 100 pair cable was installed to connect an AN/MTC-1 switchboard to the VHF/CXR site. A need arose for an MDF to be utilized, but due to the crowded conditions, it would have to be installed outside of the headquarters building. To solve the problem of protection from the climatic conditions, an unserviceable conex was obtained, roof sealed, and lighting installed. A 400 line frame was installed and the interior of the conex was painted white to provide better illumination for the frame man. The container was sandbagged to offer both the frame and personnel working inside, physical protection against possible enemy mortar attack.

OBSERVATION: Main distribution frames which, due to space limitations, must be placed outdoors can easily be placed inside unserviceable conex containers. This will help protect them from the dust and moisture which is prevalent in South Vietnam and also provide a degree of physical protection.

ITEM: Power Wiring

DISCUSSION: The rapid expansion of signal sites in many areas has brought about numerous power problems, one of which is low voltage. The solution that is too often used is the installation of autotransformers to raise the voltage to an acceptable level. The usual cause of low voltage is the size of power cable used between the power source and the load. The relationship between the size of power cable conductors and the distance to the load is also cause for low voltage if the conductors are too small for load and distance. The cable acts as a resistor thus reducing the voltage reaching the load. The best solution is arrived at by studying the power requirements, and by utilizing TM 11-486-7 (Electrical Communication Systems Engineering Power), to determine the proper gauge cable to use..

OBSERVATION: Prior to making power distribution installations, collect all the known facts and requirements and use nomograms and formulas in TM 11-456-7 for solution. Every attempt should be made to do it correctly the first time to preclude future problems.

ITEM: Water in Fuel

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DISCUSSION: During the rainy season, water in fuel is a very prevalent hazard to proper functioning, care and maintenance of power generating equipment. Some steps that can be taken to prevent this are:

- a. Provide shelter for POL and power equipment.
- b. Make sure POL drums are always kept tightly sealed when not in use.
- c. Make sure all lines and adapters are properly installed.

OBSERVATION: It is impossible to communicate without power. Frequent checks should be made and prompt action must be taken to insure that no foreign matter has been introduced into the fuel system of any power generating equipment. This same program should also be adopted in connection with motor vehicles.

ITEM: Increasing AN/TRC-24 Antenna Efficiency.

DISCUSSION: Water is an enemy to Communications in that it deteriorates equipment and decreases the overall efficiency of any communication system. The AN/TRC-24 antenna is constantly exposed to the elements. Too often maintenance is based on an "as required basis" instead of a planned schedule. Preventative maintenance must be scheduled to insure continuous operation. Two elements of the AN/TRC-24 antenna that can be inspected are the AT-412/TRC and AT-413/TRC. Following are items that should be checked periodically:

- a. Adjustments on radiating elements must be checked for corrosion, rust and condensation. It has been learned that when the AT-412/TRC and AT-413/TRC are vertically polarized, the small drain hole quite often becomes plugged and the upright section fills with water. This changes the characteristics of the element and adversely affects proper operation. To eliminate this, a half inch diameter cork or rubber plug may be inserted into the hole at the top of the upright element of the dipole.
- b. The rubber gasket located beneath the UG-571/V must be checked for dry rot and proper fit.
- c. Bolts that mount the AT-412/TRC and AT-413/TRC to the reflector must be checked for corrosion.

OBSERVATION: Maintenance of the AN/TRC-24 Radio must include many of the minor but important items of the antenna as well as the radio components. Attention to detail as cited above should be made a part of regularly scheduled maintenance to insure full time radio efficiency.

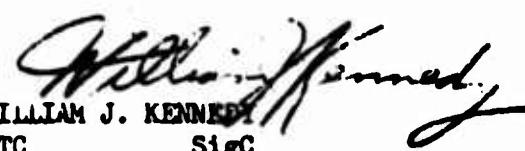
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- c. Training and organization: None
- d. Intelligence: None
- e. Logistics: None
- f. Other: None

SECTION 2 PART II RECOMMENDATIONS: None


WILLIAM J. KENNEDY
LTC SigC
Commanding

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SCCVSG-00 (11 May 1967) 1st Ind 7 JUN 1967
SUBJECT: Operational Report for Quarterly Period Ending 30 April 1967
(RCS CSFOR-65)

HEADQUARTERS, 2D SIGNAL GROUP, APO 96491

THRU: Commanding General, 1st Signal Brigade (USASTRATCOM), APO 96307
Commanding General, United States Army Vietnam, APO 96307
Commanding General, United States Army Pacific, APO 96558

TO: Assistant Chief of Staff for Force Development, Department of the
Army (ACSFOR, DA), Washington, D.C. 20310.

1. The Operational Report for Quarterly Period Ending 30 April 1967
submitted by the 52d Signal Battalion has been reviewed and found to be
adequate.

2. I fully concur in the Commander's Observations and Recommendations
portion of the report.

1 Incl
no

John B. McKinney
JOHN B. McGINNEY
Colonel, SigC
Commanding

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SOCTOP (11 May 67)

2d Ind

SUBJECT: Operational Report for Quarterly Period Ending 30 April 1967
(RCS CSFOR-65)

DA, HQ, 1st Sig Bde (USASTRATCOM) APO SF 96307

9 JUN 1967

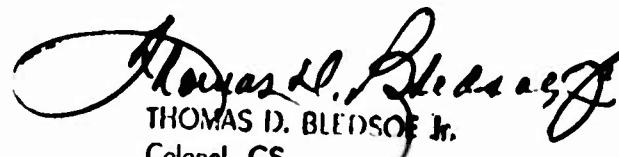
TO: Commanding General, United States Army Vietnam, ATTN: AVHGC-DST,
APO 96307

Commanding General, United States Army Strategic Communications
Command, Fort Huachuca, Arizona 85613

1. IAW, AR 1-19, subject from the 52d Signal Battalion is forwarded.
2. Concur with the Commander's Observations.

FOR THE COMMANDER:

1 Incl
nc


THOMAS D. BLEDSOE Jr.
Colonel, GS
Chief of Staff

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AVHGC-DST (11 May 67)

3d Ind

SUBJECT: Operational Report-Lessons Learned for the Period Ending
30 April 1967 (RCS CSFOR-65)

HEADQUARTERS, UNITED STATES ARMY VIETNAM, APO San Francisco 96307 22 JUN 1967

TO: Commander in Chief, United States Army, Pacific, ATTN: GPOP-OT,
APO 96558

1. This headquarters has reviewed the Operational Report-Lessons Learned for the period ending 30 April 1967 from Headquarters, 52d Signal Battalion as indorsed.

2. Concur in the report as indorsed.

FOR THE COMMANDER:


R. L. KENNEDY
CPT, AGC
Asst Adjutant General

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GPOP-OT(11 May 67)

474
96 Ind

SUBJECT: Operational Report-Lessons Learned for the Period Ending
30 April 1967 (RCS CSFOR-65), HQ 52d Sig Bn

HQ, US ARMY, PACIFIC, APO San Francisco 96558 12 JUL 1967

TO: Assistant Chief of Staff for Force Development, Department of the
Army, Washington, D. C. 20310

This headquarters concurs in the basic report as indorsed.

FOR THE COMMANDER IN CHIEF:



H. SUYDER
CPT, AGO
Asst AG

1 Incl
nc

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